

Operating Instructions & User's Information Manual

VIESSMANN

Please file in Service Binder

Vitodens 200

WB2 Series

Wall-mounted, gas-fired condensing boiler

For natural gas and liquid propane

Heating input NG 25 to 230 MBH
7 to 67 kW

Heating input LP 25 to 214 MBH
7 to 63 kW

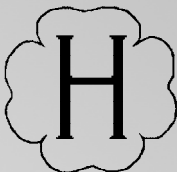


VITODENS 200



IMPORTANT

Read and save these instructions
for future reference.



WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliances.
- Do not touch any electrical switches, do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING

Improper installation, adjustment, and/or operation could cause carbon monoxide poisoning resulting in injury or loss of life.

This product must be installed and serviced by a professional service technician who is experienced and qualified in hot water boiler installation and gas combustion.

Safety, Installation and Warranty Requirements

Please ensure that these instructions are read and understood before commencing installation. Failure to comply with the instructions listed below and details printed in this manual can cause **product/property damage, severe personal injury, and/or loss of life**. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

■ Licensed professional heating contractor

The installation, service, and maintenance of this equipment *must* be performed by a licensed professional heating contractor.

► Please see section entitled "Important Regulatory and Installation Requirements" in the Installation Instructions.



■ Carbon monoxide

Improper installation, service and/or maintenance can cause flue products to flow into living space. Flue products contain *poisonous* carbon monoxide gas.

► For information pertaining to the proper installation, service and maintenance of this equipment to avoid formation of carbon monoxide, please see the Installation Instructions of the Vitodens 200 Direct Vent System.



■ Equipment venting

Never operate boiler without an *installed venting system*. An improper venting system can cause carbon monoxide poisoning.

■ Warranty

Information contained in this and related product documentation must be read and followed. *Failure to do so renders warranty null and void.*



■ Product documentation

Read all applicable documentation before commencing installation. Store documentation near boiler in a readily accessible location for reference in the future by service personnel.

► For a listing of applicable literature, please see section entitled "Important Regulatory and Installation Requirements" in the Installation Instructions.



WARNING

Installers must follow local regulations with respect to installation of carbon monoxide detectors. Follow manufacturer's maintenance schedule of boiler.

■ Advice to owner

Once the installation work is complete, the heating contractor must familiarize the system operator/ultimate owner with all equipment, as well as safety precautions/requirements, shut-down procedure, and the need for professional service annually before the heating season begins.

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About these Instructions



Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.



WARNING

Indicates an imminently hazardous situation which, if not avoided, could result in death, serious injury or substantial product/property damage.

→ Warnings draw your attention to the presence of potential hazards or important product information.



CAUTION

Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product/property damage.

→ Cautions draw your attention to the presence of potential hazards or important product information.

IMPORTANT

→ Helpful hints for installation, operation or maintenance which pertain to the product.



→ This symbol indicates that additional, pertinent information is to be found in column three.



→ This symbol indicates that other instructions must be referenced.

For your Safety

■ Operation

Before operating the boiler, make sure you fully understand its method of operation. Your heating contractor should always perform the initial start-up and explain the system. Any warranty is null and void if these instructions are not followed.

■ Flue gas smell

- Deactivate heating equipment.
- Open windows and doors.
- Inform your heating contractor.

■ Working on the equipment

All personnel working on the equipment or the heating system must have the **proper qualifications** and hold all necessary licenses.

Ensure **main power** to equipment, heating system, and all external controls has been **deactivated**. **Close main gas supply valve**. Take precautions in all instances to avoid accidental activation of power during service work.

■ Dangerous conditions

- Deactivate main power immediately.
- Close gas supply valve.

■ Maintenance and cleaning

Regular inspection and service by a qualified heating contractor is important to the performance of the Viessmann Vitodens 200. Neglected maintenance impacts on warranty; regular inspection ensures clean, environmentally friendly and efficient operation. We recommend a maintenance contract with a qualified heating contractor.

■ Technical information

Literature applicable to all aspects of the Vitodens 200:

- Technical Data Manual
 - Installation Instructions
 - Start-up/Service Instructions
 - Operating Instructions and User's Information Manual
 - System Design Guidelines
- Additional applicable literature:*
- Accessory manuals

For your Safety (continued)

■ Carbon monoxide

The U.S. Consumer Product Safety Commission strongly recommends the installation of carbon monoxide detectors in buildings in which gas-burning equipment is installed. Carbon monoxide (CO) is a colorless, odorless gas, which may be produced during incomplete combustion of fuel and/or when the flame does not receive an adequate supply of combustion air.

Carbon monoxide can cause severe personal injury or loss of life.

Therefore, carbon monoxide detectors that are in compliance with a nationally recognized standard (e.g. ANSI/UL 2034-2002, CSA 6.19-01) should be installed and maintained in buildings that contain gas-burning equipment.

Note:

Viessmann does not test any detectors and makes no representation regarding any brand or type of detector.

■ For safe operation

We recommend that you frequently:

- Check for debris which could obstruct the flow of flue gases. The vent or chimney must not be blocked. A blocked or partially blocked vent or chimney can cause flue gases to leak into the structure. Flue gases leaking into the house can cause injury or death. Blocked or partially blocked chimneys must have the blockage removed by a qualified heating contractor.
- Check pressure gage for correct system (water) pressure. Check for water on the floor from the discharge pipe of the pressure relief valve or any other pipe, pipe joint, valve or air vent.
- Check for moisture, water, or appearance of rust on the flue gas pipes, their joints as well as vent dampers, or side wall vent terminals (if so equipped).
- Ensure that nothing is obstructing the flow of combustion and ventilation air and no chemicals, garbage, gasoline, combustible materials, flammable vapors and liquids are stored (not even temporarily) in the vicinity of the boiler.
- Do **not** allow unsupervised children near the boiler.

Service/inspection of the boiler and the system is recommended once a year. Maintenance, service and cleaning are specified in the Installation Instructions.

Before the heating season begins, it is recommended that the boiler and burner be serviced by a qualified heating contractor. Service contracts may be established through gas suppliers or other licensed contractors in your area.



WARNING

As there are no user-serviceable parts on the boiler, burner or control, the end-user must not perform service activities or adjustments of any kind on system components. Failure to heed this warning can cause property damage, severe personal injury, or loss of life.



WARNING

Improper installation, adjustment, service, or maintenance can cause flue products to flow into living space. Flue products contain poisonous carbon monoxide gas which can cause nausea or asphyxiation resulting in severe personal injury or loss of life.



CAUTION

Should overheating occur or the gas supply fail to shut off, do not disconnect the electrical supply to the pump. Instead, shut off the gas supply at a location external to the appliance.



WARNING

The operator/ultimate owner is required to have the heating boiler, burners, and controls checked, as a minimum once per year, by the original installer or by a competent heating contractor familiar with the equipment. Defects must be corrected immediately.



CAUTION

Do not use this boiler if any part has been under water. Immediately call a qualified heating contractor to inspect the boiler and to replace any part of the control system and any gas control which has been under water.

For your Safety (continued)

Frozen water pipe hazard



WARNING

Failure to protect against frozen pipes could result in burst water pipes, serious property damage and/or personal injury. Boiler may shut down. Do not leave your home unattended for long periods of time during freezing weather conditions without turning off the water supply and draining water pipes or otherwise protecting against the risk of frozen pipes.

Your heating boiler is designed to provide a warm and comfortable living environment. It is NOT designed to ensure against freezing of water pipes.

The boiler is equipped with several safety devices that are designed to shut down the boiler and to prevent it from restarting in the event of various unsafe conditions.

If your boiler remains off for an extended period of time during cold weather, water pipes may freeze and burst, resulting in extensive water damage and conditions in which mold could grow. Certain molds are known to cause respiratory problems, as well as to pose other serious health risks. In case of water damage, immediate measures should be taken to dry out affected areas as quickly as possible to prevent mold from developing.

If your home will be unattended for an extended period of time during cold weather, you should...

- Shut off the water supply to the building, drain the water pipes and add an antifreeze for potable water to drain traps and toilet tanks. Open faucets where appropriate.

Or..

- Have someone check the building frequently during cold weather and call a qualified service agency if required.

Or...

- Install a reliable remote temperature sensor that will notify somebody of freezing conditions within the home.

For your Safety (continued)

If you notice fire coming from the appliance, call the fire department immediately! Do not attempt to extinguish the fire unless qualified to do so.



WARNING

Fire causes a risk of burns and explosion!

- Shut down the boiler
- Close fuel shut-off valves
- Use a tested fire extinguisher, class ABC.

Installation area conditions



WARNING

Incorrect ambient conditions can lead to damage to the heating system and put safe operation at risk.

- Ensure ambient temperatures are higher than 32°F / 0°C and lower than 104°F / 40°C.
- Prevent the air from becoming contaminated by halogenated hydrocarbons (e.g. as contained in paints solvents or cleaning fluids) and excessive dust (e.g. through grinding or polishing work).
Combustion air for the heating process, and ventilation of the boiler room must be free of corrosive contaminants. To that end, any boiler must be installed in an area that has no chemical exposure. The list to the right indicates the main, currently known sources.
- Avoid continuously high levels of humidity (e.g. through frequent drying of laundry).
- Never close existing ventilation openings.

Replacement components, spare and wear parts

IMPORTANT

Components which are not tested with the heating system may damage the heating system, or affect its functions. Installation or replacement may only be carried out by a qualified heating contractor.

Sources of combustion and ventilation air contaminants

Areas likely to contain contaminants:

- New building construction
- Swimming pools
- Remodelling areas, hobby rooms
- Garages with workshops
- Furniture refinishing areas
- Dry cleaning/laundry areas and establishments
- Auto body shops
- Refrigeration repair shops
- Metal fabrication plants
- Plastic manufacturing plants
- Photo processing plants
- Beauty salons

Products containing contaminants:

- Chlorine-type bleaches, detergents and cleaning solvents found in household laundry rooms
- Paint and varnish removers
- Hydrochloric acid, muriatic acid
- Chlorine-based swimming pool chemicals
- Spray cans containing chlorofluorocarbons
- Chlorinated waxes and cleaners
- Cements and glues
- Refrigerant leaks
- Calcium chloride used for thawing
- Sodium chloride used for water softening salt
- Permanent wave solutions
- Adhesives used to fasten building products and other similar items
- Antistatic fabric softeners used in clothes dryers

Getting Started...

The timer of the control unit switches between "normal room temperature" and "reduced room temperature" at the required times.

1. Normal room temperature

for the times you spend at home and require a comfortably warm room temperature (e.g. 68 °F/20 °C).

→ *Times and duration of the two room temperatures can be set on the programming unit of your control. The temperature settings for both the "normal room temperature" and "reduced room temperature" can be set according to your personal preference.*

2. Reduced room temperature

for the times you are away from home. To save energy, a lower temperature is typically selected (e.g. 57 °F/14 °C).

The timer of the control unit switches domestic hot water production on and off at the required times.

1. Domestic hot water heating can be set to take place

during the times you spend at home and require hot water for your daily DHW requirements (e.g. for showering).

→ *Times and duration of the domestic hot water production period can be set on the programming unit of your control.*

You may select a DHW temperature setting based on your personal preference of up to 140 °F/60 °C.

2. Domestic hot water heating can be set not to take place

for the times you spend sleeping, for example.

The domestic hot water recirculation pump (if installed) ensures that domestic hot water is readily available when domestic hot water is drawn.

Your Vitodens 200 Boiler

Please ask your heating contractor to check off the appropriate box (☒).

☐ **Vitodens 200
without domestic hot water tank**

The control unit activates and deactivates space heating and supplies rooms with heat.

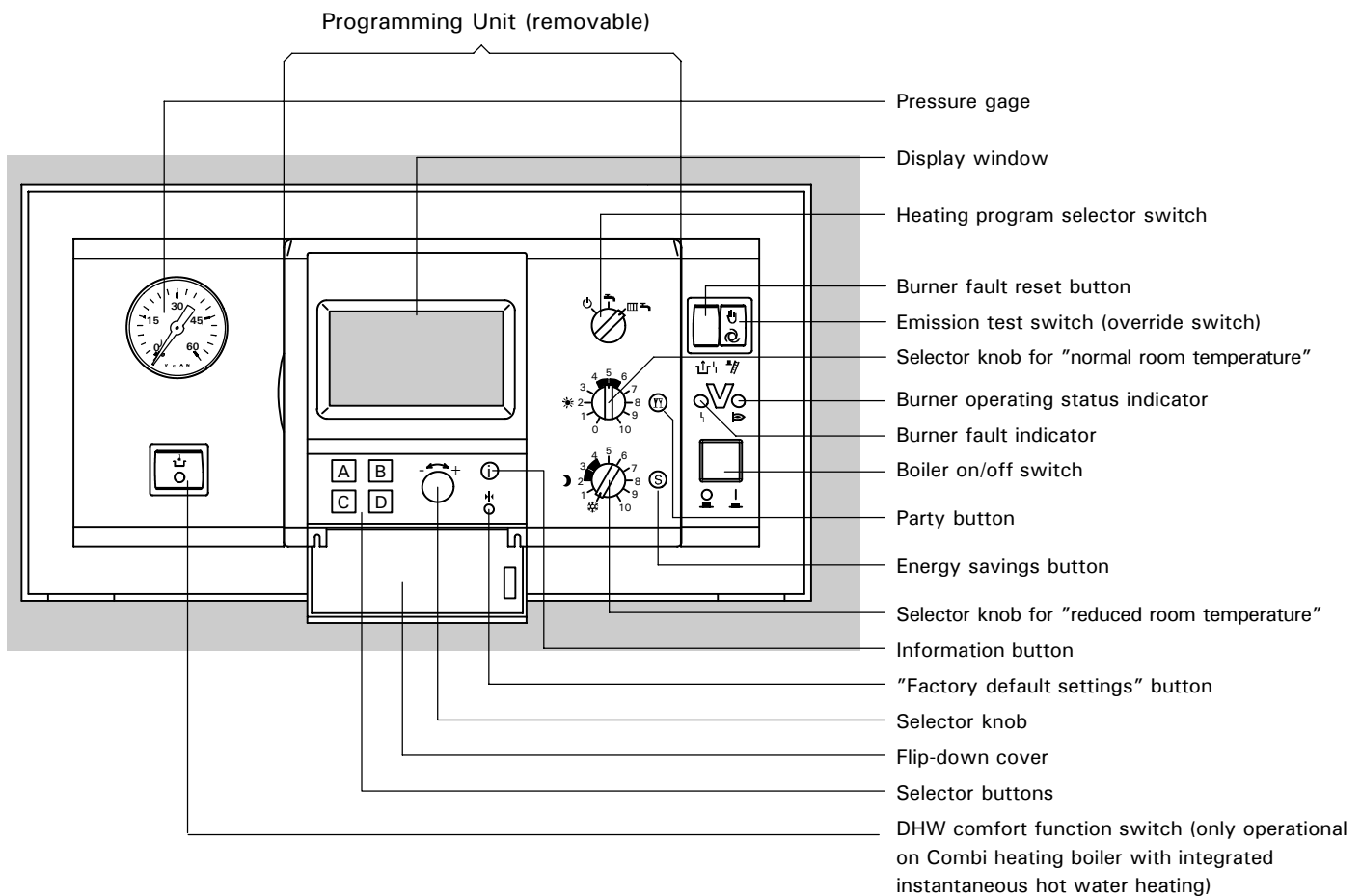
☐ **Vitodens 200
with separate domestic hot water tank**

Domestic hot water heating has priority over space heating. The control unit switches automatically to space heating when the preset domestic hot water temperature is reached.

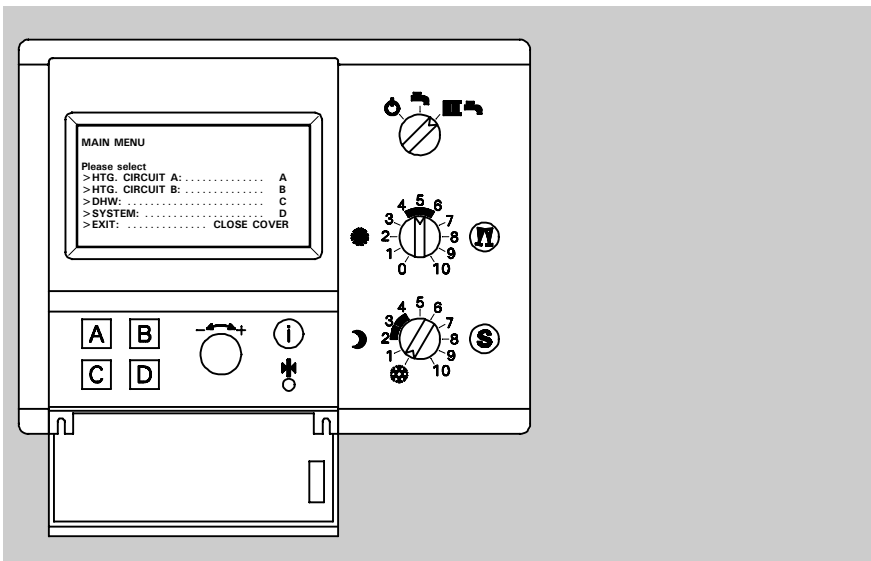
☐ **Vitodens 200
with integrated DHW plate heat exchanger for instantaneous DHW heating**

Domestic hot water heating has priority over space heating. The control unit switches automatically to space heating when the heat exchanger temperature is satisfied (with comfort switch on) or when the preset domestic hot water temperature is reached (with comfort switch off).

Overview of Controls and Indicators



Overview of Controls and Indicators (continued)

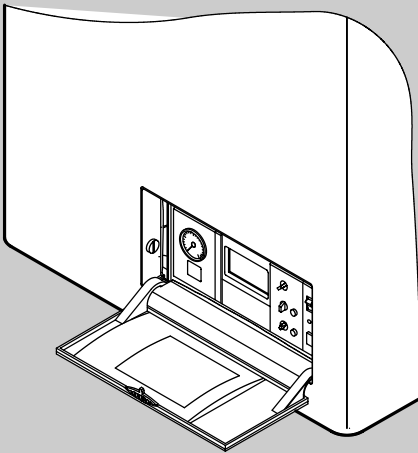


Operation

The is a menu-driven programming unit. Upon opening the flip-down cover of the programming unit, the start menu showing all available adjustment options will appear in the display window. Select your adjustment option by pressing buttons "A", "B", "C" or "D".

An overview of the menu structures available can be found in section entitled "Overview of menu structures" on page 34 of this manual.

The Main Control Options



*All settings can be adjusted directly on the boiler control or on the remote control (when the programming unit is used as remote control).
The programming unit can be removed from the control unit and mounted on a wall-mount base (available as accessory) anywhere in your main living area and used as a remote control. In instances where the programming unit is used as remote control, a temperature indicator (available as accessory) must be installed in place of the programming unit in the control base on the boiler.*

The control unit is located behind the hinged cover in the front of the boiler. Open hinged cover of the control by exerting slight pressure with your fingertip on top of the cover. Ensure hinged cover is closed after every use to guarantee splash protection.

Your heating system comes factory preset ...

*The control unit comes factory preset to a standard operating mode.
This means your heating system is ready for operation.
All factory default settings can be changed to reflect your personal preferences.*

Date and time

The date and time are factory preset and are updated through the built-in long-life battery.
Should time and/or date be incorrect please see section entitled "Changing Time and Date" on page 25 in this manual.

Heating program

The heating program is set to "Space heating and domestic hot water", i.e. space heating and domestic hot water production take place in accordance with preset switching times.

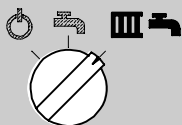
Switching times

The switch-on time is set to 6:00 hrs, the switch-off time to 22:00 hrs.
Between 6:00 hrs and 22:00 hrs, space heating takes place at normal room temperature with domestic hot water production (if installed) when required.
Between 22:00 hrs and 6:00 hrs, space heating takes place at reduced room temperature.

→ Press button "⏮" to reset the switching times to their factory default settings.
Please note that this will reset all altered values to their original factory default setting.

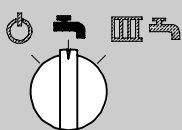
Selecting a Heating Program (winter, summer)

Select one of the following heating programs according to your personal requirements.



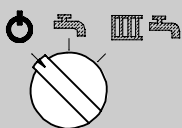
Space heating and domestic hot water → e.g. for winter months and transitional periods.

- Space heating at normal or reduced room temperature according to preset switching times
- Domestic hot water production (with DHW tank installed or with Combi heating boiler)
- Freeze-up protection of boiler and the DHW storage tank.



Domestic hot water only → e.g. for summer months.

- No space heating
- Domestic hot water production (with DHW tank installed or with Combi heating boiler)
- Freeze-up protection of boiler and DHW storage tank.



Standby operation → e.g. for summer holiday period.

- No space heating
- No domestic hot water production
- Freeze-up protection of boiler and DHW storage tank.

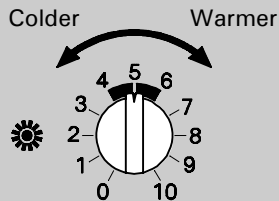
IMPORTANT

The circulation pumps are switched on for a short time every 24 hours to prevent them from seizing up.

Changing Room Temperature

In the "Space heating and domestic hot water" heating program, space heating takes place at "normal room temperature" and "reduced room temperature" depending on preset switching times.

You can set the required room temperature as follows.



"Normal room temperature"

(factory default setting: 6:00 hrs to 22:00 hrs)

Setting "5" corresponds to a room temperature of approx. 68 °F/20 °C with a correctly adjusted heating curve.

"Normal room temperature" can be set between 41 and 95 °F/ 5 and 35 °C.

→ Example

For the times you spend at home and require a comfortably warm room temperature.



"Reduced room temperature"


(factory setting: 22:00 hrs to 6:00 hrs)

Setting "⚙" corresponds to a room temperature of approx. 41 °F/5 °C with a correctly adjusted heating curve.

"Reduced room temperature" can be set between 41 and 95 °F/ 5 and 35 °C.

→ Example

At nighttime or when you are away from home.

SELECTED ROOM TEMP 
PREVIOUS: 20°C
CURRENT: 22°C

INFO: OPEN COVER

Changing the room temperature

1. Turn selector knob "⚙" or "☀".

The (previous and current) temperature values appear in the display window.

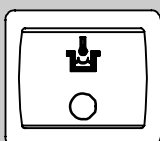
2. Set the (current) temperature required using the selector knob.

3. The display automatically disappears after approx. 5 seconds. The selected temperature is stored.

→ Please reference section "Changing the heating pattern of the boiler" on page 26 in this manual.

Switching DHW Comfort Function On/Off (for Combi Series with integrated instantaneous DHW heat exchanger)

When the comfort function is activated, the integrated instantaneous hot water heating function maintains a certain domestic hot water temperature level (standby). Domestic hot water is thus readily available when required.



With button "⚡" the comfort function can be switched on and off.

→ The DHW comfort function can be deactivated in order to avoid frequent activation of the boiler, i.e. to reduce the energy consumption used for maintaining a certain DHW temperature if no domestic hot water is drawn (e.g. at nighttime).

Setting the Party Mode

Activate the party mode when you require space heating for a short period of time, independent of the preset heating program and outside the preset switching times. You can adjust the room temperature (party temperature) to suit your personal preference.

MONDAY, 20.05.97
10:30 pm
PARTY MODE **Y**
SELECTED: 20°C
CHANGE PARTY TEMP.:
OPEN COVER
BOILER TEMP.: 53°C

To activate the party mode

Press the party button "**Y**".
The party mode is now displayed together with the preset party temperature.

→ Example

Use the party mode option when you wish to stay up longer than usual (e.g. when you have guests) and require space heating without having to change the switching times.

To change the room temperature (party temperature)

Open the flip-down cover of the programming unit and follow the instructions in the display window. Ensure cover is closed when change is made.

To cancel the party mode

The party mode is cancelled automatically the next time the preset heating program switches to "normal room temperature".

If you want to cancel the party mode immediately, press the party button "**Y**" again.

Activating the Energy Saving Mode

Activate the energy saving mode when you require particularly economical space heating for a short period of time. In the energy saving mode, the preset room temperature is automatically lowered by approx. 3.6 °F/2 °C.

TUESDAY, 21.05.97
10:35 HRS
ENERGY SAVING MODE **S**
BOILER TEMP.: 53°C
INFO: OPEN COVER

To activate the energy saving mode

Press the energy saving button "**S**".
The energy saving mode is now displayed.

→ Example

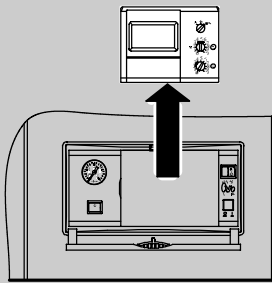
Use the energy saving mode option when you are not at home for a period of time (e.g. to go shopping) and wish to lower the temperature without having to adjust the temperature selector switch and the switching times.

To cancel the energy saving mode

The energy saving mode is cancelled automatically the next time the preset heating program switches to "reduced room temperature".

If you want to cancel the energy saving mode immediately, press the energy saving button "**S**" again.

Using the Remote Programming Option



The programming unit provides you with the option of programming your right from your armchair. Simply remove the programming unit from the control base in the front of the boiler or, if used as remote control, from the wall-mount base, and perform your programming from wherever convenient.

Be sure to insert the programming unit in the control unit or wall-mount base upon completion of your programming.

The following options can be programmed:

- Time programs
- Room temperature values
- Heating curves
- Time and date

→ Before using the "remote programming option" for the first time, insert the programming unit in the control unit or in the wall-mount base for approx. 2 minutes. Switch off the heating system switch on the control unit before removing and inserting the programming unit.

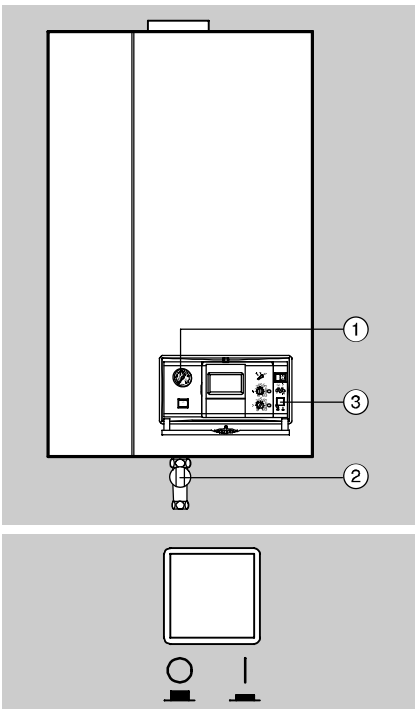
Initial Start-up and Re-starting the Heating System

Initial start-up and adjustment of the control unit to local conditions and the structural characteristics of your building must be performed by your heating contractor.

We recommend that you contact your heating contractor before re-starting the heating system if it has been shut down for a long period of time.

To start up the system

1. Check heating system pressure on the pressure gage ①.
Minimum system pressure 12 psig.
If the needle of the pressure gage is below 12 psig, the system pressure is too low, in which case you must contact your heating contractor.
2. Open the gas shutoff valve ② (field supplied).
3. Switch on line voltage (e.g. at separate fuse/circuit breaker).
4. Switch on the heating system on/off switch ③.
Your heating system is now ready for operation.



Shutting Down the Heating System

In case you are not intending to use your heating system for a period of time, e.g. during your summer holidays, switch your heating system to standby operation (see section entitled "Selecting a heating program", page 13).

If you do not want to use your heating system for a longer period of time (several months), you should shut it down.

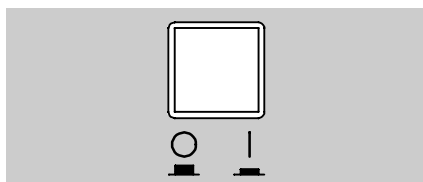
We advise you to contact your heating contractor before shutting down the heating system for longer periods of time.

Your heating contractor will then take any required action/precautions, e.g. providing freeze-up protection of the system or safeguarding the heat exchanger surfaces.

To shut down the heating system

1. Switch off the heating system on/off switch.
2. Close gas shutoff valve and secure against unintentional opening.
3. Switch off line voltage (e.g. at separate fuse/circuit breaker).
The power supply to the system is now switched off. **There is no freeze-up protection.**

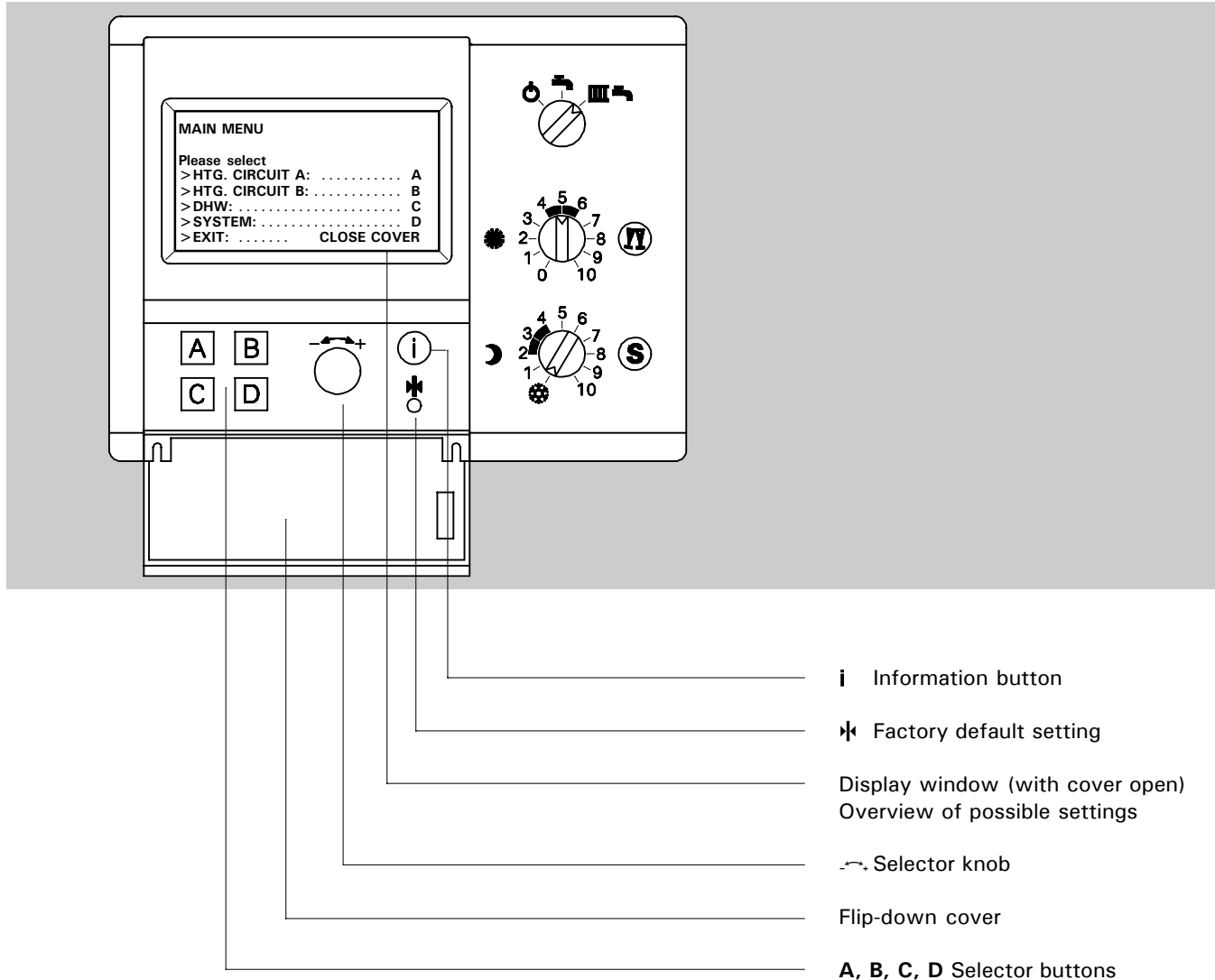
→ *All settings of the control unit still remain intact.*



The Programming Unit Is Your Assistant

With the programming unit you can set the heating system settings according to your personal preferences and requirements by using the various functions and adjustment options offered through the programming unit. Most of the functions offered are easily accessible through the main menu.

Thus switching times, temperatures and heating curves can be navigated and adjusted in a straight-forward fashion.



When you open the cover on the programming unit, the display shows an overview of possible settings. Select the settings you require by using selector buttons "A", "B", "C" or "D". If the display requests you to enter a numerical value, you can define the value with selector knob "".

→ *The steps required to make individual settings are explained in detail on the following pages.*

You will find an overview of the menu structures (in section entitled "Overview of Menu Structures") on page 34 of this manual.

How Switching Times Work ...

By setting the switching times accordingly, space heating can switch up to 4 times a day between "normal room temperature" and "reduced room temperature".

→ In the factory default setting, space heating takes place at "normal room temperature" between 6:00 hrs until 22:00 hrs every day of the week.

When setting switching times, take into account the reaction time required by your heating system.

Select earlier switch-on and switch-off times accordingly.

Scanning and Changing Switching Times

To change switching times for the day displayed

Press the following buttons:

1. for "Heating circuit A"


or

for "Heating circuit B"

2. for "Timer"

3. for "Switching times"

4. for "Time schedule"

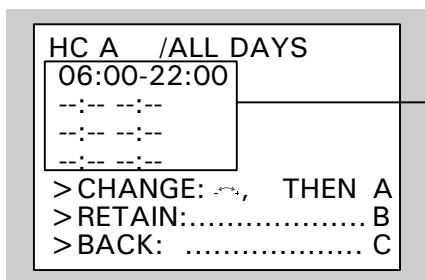
5.  Turn the "-↺+↻" selector knob to set the **switching times**

6. to **confirm** each setting

→ In each of the 4 input lines of the display window you can enter one switch-on time and one switch-off time at which the "normal room temperature" is to be switched on/off. In case you inadvertently change a switching time, you can reset it to the original setting by pressing button "B", as long as the change has not been confirmed.

You can scan the switching times for the day displayed following the same procedure.

Exit the switching time setting mode by closing the cover or by pressing the "C" button to return to menu option "Switching times".




HC A /ALL DAYS

06:00-22:00

--:-- --:--

--:-- --:--

--:-- --:--

> CHANGE: , THEN A

> RETAIN:..... B

> BACK: C

Scanning and Changing Switching Times (continued)

To change switching times for other days of the week

Press the following buttons:

1. **[A]** for "Heating circuit A"

or

[B] for "Heating circuit B"

2. **[A]** for "Timer"

3. **[A]** for "Switching times"

4. **[B]** for "Different days"

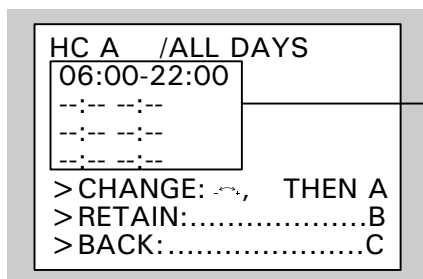
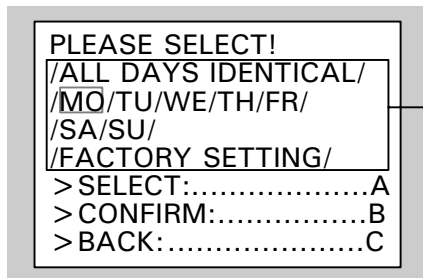
5. **[A]** continue pressing **[A]** until the
desired day flashes

6. **[B]** to confirm your selection


→ **Examples:**

Select "**MO**" if you wish to change the
switching times for Monday only.

Select "**ALL DAYS IDENTICAL**" if you
wish to set the same switching times
for every day of the week.



7. **[A]** for "Time schedule"

8.  Turn the "-↺+" selector
knob to set the **switching**
times

9. **[A]** to confirm each setting

→ **Please note:**

In each of the 4 input lines of the
display window you can enter one
switch-on time and one switch-off
time at which the "normal room
temperature" is to be switched on/off.
In case you inadvertently change a
switching time, you can reset it to the
original setting by pressing button
"**B**", as long as the change has not
been confirmed.

You can scan the switching times for
the day displayed following the same
procedure.

Exit the switching time setting mode by
closing the cover or by pressing the "**C**"
button to return to menu option
"Switching times".

How Switching Times Work ...

On Vitodens 200 boilers equipped with a stand-alone domestic hot water storage tank, domestic hot water production can be switched on and off up to 4 times daily by setting the switching times accordingly.

→ *In the factory default setting, domestic hot water production takes place continuously between 6:00 hrs until 22:00 hrs every day of the week.*


Switching times for the DHW recirculation pump (if installed) can be set separately.

When setting switching times, take into account the reaction time required by your heating system. Choose correspondingly earlier switch-on and switch-off times.

Scanning and Changing Switching Times

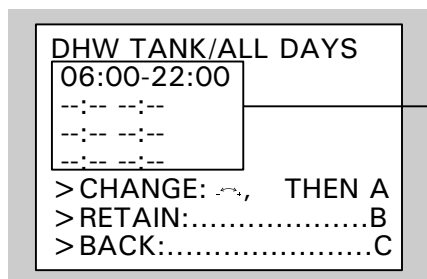
To change switching times for the day displayed

Press the following buttons:

1. for "DHW"
2. for "DHW tank"
or
 for "DHW recirc. pump"
3. for "Time schedule"
4. for "Time schedule"
5.  Turn the "-↔+" selector knob to set the **switching times**
6. to **confirm** each setting

→ **Please note:**

In each of the 4 input lines of the display window you can enter one switch-on time and one switch-off time at which domestic hot water production or the DHW recirculation pump is switched on/off. Activation periods for the DHW recirculation pump should be selected for periods when you are at home and require domestic hot water. In case you inadvertently change a switching time, you can reset it to the original setting by pressing button "B", as long as the change has not been confirmed.



You can scan the switching times for the day displayed following the same procedure.

Exit the switching time setting mode by closing the cover or by pressing the "C" button to return to menu option "Switching times".

Scanning and Changing Switching Times (continued)

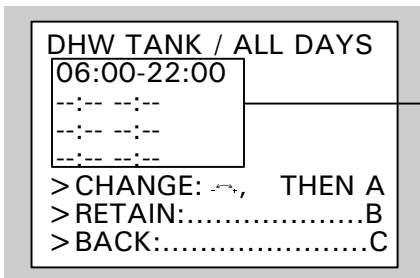
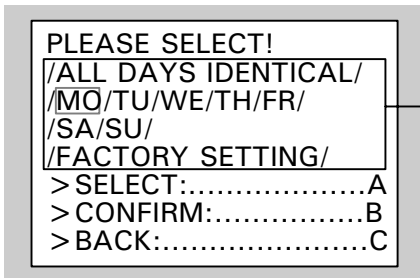
To change switching times for other days of the week


Press the following buttons:

1. for "DHW"
2. for "DHW tank"
or
 for "DHW recirculation pump"
3. for "Time schedule"
4. for "Different days"
5. continue pressing until **desired day flashes**
6. to **confirm** your choice

→ **Examples:**

Select "**MO**" if you wish to change the switching times for Monday only.
Select "**ALL DAYS IDENTICAL**" if you want to set the same switching times for every day of the week.



7. for "Time schedule"
8.  Turn the "-↔+" selector knob to set the **switching times**
9. to **confirm** each setting

→ **Please note:**

In each of the 4 input lines of the display window you can enter one switch-on time and one switch-off time at which domestic hot water production or the DHW recirculation pump is switched on/off.

In case you inadvertently change a switching time, you can reset it to the original setting by pressing button "**B**", as long as the change has not been confirmed.

You can scan the switching times for the day displayed following the same procedure.


Exit the switching time setting mode by closing the cover or by pressing the "**C**" button to return to menu option "Switching times".

Changing the Domestic Hot Water Temperature

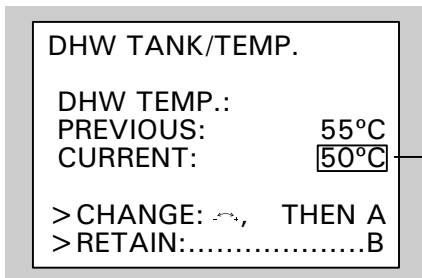
Only on boiler with separate DHW tank

You can select the domestic hot water temperature according to your personal preference (e.g. for showering).

Press the following buttons:

1. **[C]** for "DHW"
2. **[A]** for "DHW tank"
3. **[B]** for "Temperature"
4. **[A]** for "Change temperature"
5.  Turn the "-↔+" selector knob to set the **temperature**
6. **[A]** to **confirm** each setting

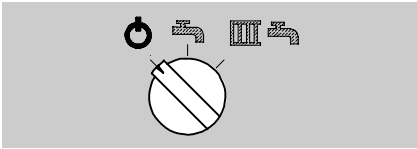
→ *In case you inadvertently change a temperature setting, you can reset it to the original setting by pressing button "B", as long as the change has not been confirmed.*



Exit the temperature setting mode by closing the cover or by pressing the "C" button to return to menu option "Switching times".

Setting the Energy Saving Mode for the Holiday Period

When going away on a holiday and you wish to reduce the energy consumption of your heating system as much as possible, select one of the following heating programs.



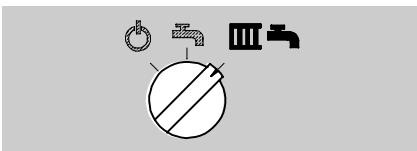
Standby operation

- No space heating
- No domestic hot water heating
- Freeze-up protection of the heating system

→ e.g. for your holiday period.

IMPORTANT

The circulation pumps are activated for a short period of time every 24 hours to prevent them from seizing up.



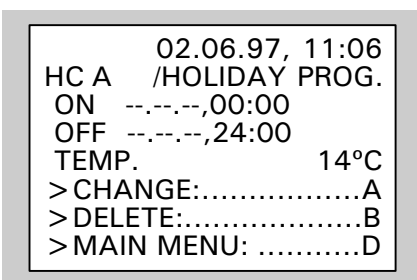
Holiday program

- Constant room temperature, can be set between 41 and 95 °F/ 5 and 35 °C
- No domestic hot water heating
- Programmable for 1 to 99 days
- Afterwards, space heating and domestic hot water heating automatically take place again based on selected switching times.


→ e.g. to protect house plants during your winter holiday and when you want a warm home to return to.

Press the following buttons:

1. for "Heating circuit A"
or
 for "Heating circuit B"
2. for "Timer"
3. for "Holiday program"
4. for "Change"

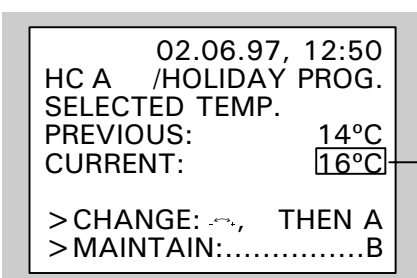


To enter the beginning and end of the holiday program


5. for "Time schedule"
6.  Turn the "-/+ " selector knob to set the beginning (ON) and end (OFF) of the holiday program.
7. to confirm each setting

→ Please bear in mind that the holiday program always ends at 24:00 hrs on the last day selected. Therefore set the program to end on the day prior to your return. Your heating system will then be active again on the day you return home.

Select "Delete" if you wish to cancel the holiday program prematurely.



To change the temperature for the holiday program

8. for "Change temperature"
9.  Turn the "-/+ " selector knob to set the temperature.
10. to confirm your selection

Changing Time and Date (if required)

```

SYSTEM / CLOCK
TODAY IS
  THURSDAY
  21.08.97
  15:30 HRS
> CHANGE DATE: .....A
> CHANGE TIME: .....B
> BACK:.....C
  
```

Press the following buttons:

1. for "System"
2. for "Factory setting"
3. for "Clock"

You are now in the "Clock" menu.
Follow the instructions in the menu and set the required date and/or time.

Scanning Temperatures and Operating Status

```

HC A / STATUS
THE PROGR. UNIT
IS ASSIGNED TO:
  HC A
> CONTINUE.....A
> BACK:.....C
> MAIN MENU: .....D
  
```

You can access and scan various system temperatures and operating status information as follows.

Press the following buttons:

1. for "Heating circuit A"
or
 for "Heating circuit B"
2. for "Operating status"
3. for "Continue" to scan the required values

Selecting the Language

```

LANGUAGE / LANGUE

> ENGLISH:.....A
> FRANÇAIS:.....B

> BACK / RETOUR: .....D
  
```

Press the following buttons:

1. for "System"
2. for "Factory setting"
3. for "Language"

Changing the Heating Pattern of the Boiler

The heating pattern of your boiler is determined by the outdoor temperature and the settings of the "shift" and "slope" of the "heating curve".

You may change these settings if you feel that the room temperature does not meet your requirements during the heating season over a longer period of time.

Should you change these settings, please ensure the difference in heating pattern is observed over a sufficiently long period of time before deciding to alter these again.

Short-term changes in room temperature are made with "☀" or "☾" selector knobs (see "Changing room temperature" on page 14 in this manual).

Heating curves represent the relationship between the outdoor temperature and the boiler water or supply temperature. Put simply: The lower the outdoor temperature, the higher the boiler water or supply temperature.

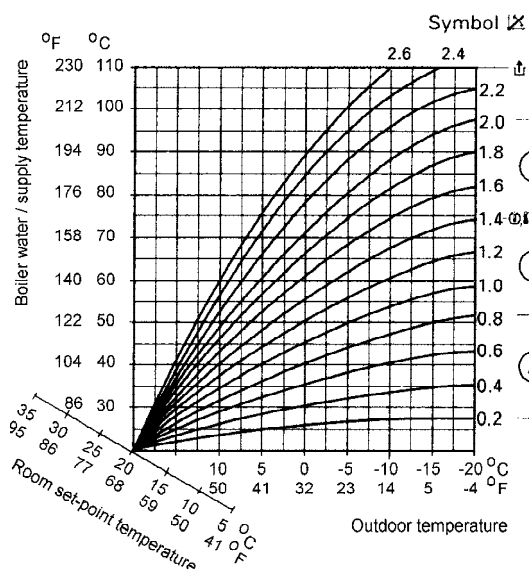
Please note:

In the factory default setting, the slope is set to 1.4 and the shift to 0.

The heating curves shown are based on the following settings:

"Shift of heating curve" = 0

"Normal room temperature ☀" = 5 (corresponding to approx. 68 °F/20 °C)



The slope of the heating curve is usually within the indicated range.

High temperature heating system, e.g. fintube radiation, fan coils

Medium temperature heating system, e.g. cast iron radiation, staple-up radiant floor heating

Low temperature heating system, e.g. radiant floor heating

Changing the heating pattern by adjusting the heating curve

HC A / HTG. CURVE

SLOPE: 1.4

SHIFT: 0 °C


MAX. LIMIT.: 127 °C

> CHANGE: ☀ THEN A

> MAINTAIN: B

> BACK: C

Press the following buttons:

1. for "Heating circuit A"
or
 for "Heating circuit B"
2. for "Heating curve"
3. for "Change"
4.  Turn the "☀☾" selector knob to change the **slope** and **shift** and the **max. temperature limit**
5. to "confirm" each setting

→ Please use table on page 27 of this manual ("Change heating pattern if...") as reference as to when to change the pattern of your heating system.

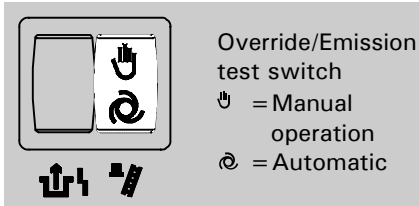
If an underfloor heating circuit is installed, a max. supply temperature limit of 113 °F/45 °C can be selected, for example.

Changing the Heating Pattern of the Boiler (continued)

Change heating pattern if ...	Action	Example
... your living area is too cold at cold time of year	Adjust slope of heating curve upward by one increment	<div> HC A / HTG. CURVE SLOPE: 1.5 SHIFT: 0°C MAX. LIMIT: 127°C > CHANGE: ↶, THEN A > MAINTAIN:..... B > BACK:..... C </div>
... your living area is too warm at cold time of year	Adjust slope of heating curve downward by one increment	<div> HC A / HTG. CURVE SLOPE: 1.3 SHIFT: 0°C MAX. LIMIT: 127°C > CHANGE: ↷, THEN A > MAINTAIN:..... B > BACK:..... C </div>
... your living area is too cold at transitional time of year and at cold time of year .	Adjust shift of heating curve upward (e.g. +3 °C)	<div> HC A / HTG. CURVE SLOPE: 1.4 SHIFT: +3°C MAX. LIMIT: 127°C > CHANGE: ↶, THEN A > MAINTAIN:..... B > BACK:..... C </div>
... your living area is too warm at transitional time of year and at cold time of year .	Adjust shift of heating curve downward (e.g. -3 °C)	<div> HC A / HTG. CURVE SLOPE: 1.4 SHIFT: -3°C MAX. LIMIT: 127°C > CHANGE: ↷, THEN A > MAINTAIN:..... B > BACK:..... C </div>
... your living area is too cold at transitional time of year , but warm enough at cold time of year.	Adjust shift of heating curve upward (e.g. +3 °C), and slope downward by one increment	<div> HC A / HTG. CURVE SLOPE: 1.3 SHIFT: +3°C MAX. LIMIT: 127°C > CHANGE: ↶, THEN A > MAINTAIN:..... B > BACK:..... C </div>
... your living area is too warm at transitional time of year , but warm enough at cold time of year.	Adjust shift of heating curve downward (e.g. -3 °C), and slope upwards by one increment	<div> HC A / HTG. CURVE SLOPE: 1.5 SHIFT: -3°C MAX. LIMIT: 127°C > CHANGE: ↷, THEN A > MAINTAIN:..... B > BACK:..... C </div>

Override Switch/Emission Test Switch

The following information is provided for emission inspection purposes, and for temporary override of the outdoor reset control.



For flue gas measurement at constant boiler water temperature for a short period of time:

1. Open hinged cover on the enclosure panel.

2. Turn the emission test switch "☞" from "⌚" to "☞".

3. Activate heat emitters (e.g. by opening the thermostatic valves).


4. After completing the measurement, turn emissions test switch "☞" back to "⌚".


5. Close cover.

→ *The following functions are triggered when using the emission test switch (manual operation):*

- *The boiler water temperature is limited by a limit aquastat.*
- *The circulation pumps are activated.*
- *The mixing valve (if installed) remains in its control mode.*
- *The burner is switched on (at max. input).*

Diagnosis and Correction

TUESDAY, 25.06.97
15:20 HRS
PROGRAM 

SPACE HEATING: ON 
BOILER TEMP.: 53°C
....FAULT...
INFO: OPEN COVER





If a fault occurs on your heating system, it will be displayed in the display window with the cover closed. Using the scanning function, you can access the fault cause in the display and inform your heating contractor accordingly.

FAULT SEARCH

FAULT:
OUTDOOR TEMP.
SENSOR

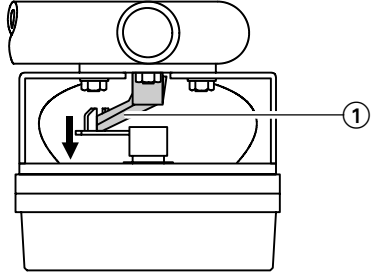
> HEATG. CONTRACTOR: i
> ACKNOWLEDGE: A

Open cover and press the following buttons:

1.  for **"Fault search"**.
The fault cause is displayed in plain language or in form of an error code.
2.  for **"Heating contractor"**.
The address and telephone number of your heating contractor are displayed (given the information was entered at time of start-up).
3.  to exit the information menu.
4.  for **"Acknowledge"**

→ *The fault message and corresponding alarm are cancelled. The fault message will re-appear at 0:00 hrs the following day if the fault has not been addressed in the meantime.*

Diagnosis and Correction (continued)

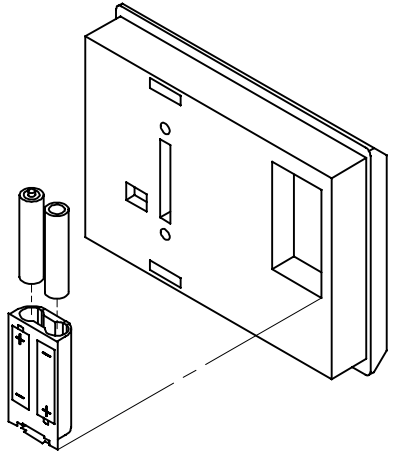
Fault	Cause	Corrective Action
Heating system does not start up	Heating system switch turned to OFF on control unit	Turn switch to ON on control unit.
	Circuit breaker or fuse in power supply, in power/pump module or in boiler control unit has blown or tripped	Inform heating contractor.
Burner does not switch on or only intermittently	No gas	Open gas shut-off valve.
	Control unit incorrectly programmed or set	Check, and if necessary, correct setting of heating program selector switch and timer programming.
	Fault on control unit	Inform heating contractor. After consulting your heating contractor, the boiler can be operated temporarily at constant boiler water temperature by operating the override/emissions test switch "A".
Burner does not start up; red burner fault lamp "I" is lit on control unit	Faulty start-up	Press burner fault reset button "I". Should this attempt fail, contact your heating contractor.
	Low water level or pressure, water pressure sensor has activated	Inform heating contractor.
Rooms are cold although burner is operating	Domestic hot water supply has priority (operation with DHW storage tank only)	Wait until the domestic hot water heating is complete.
If mixing valve controller installed: Boiler in operation, but heating circuit cold	Mixing valve controller defective	Pull out motor lever and adjust mixing valve lever ① manually. Inform heating contractor. 
"Fault" flashes in display window	Fault on heating system	Make a note of the fault code and inform heating contractor (see page 29 in this manual).



Warning

Visually inspect the vent termination for any signs of blockage. Under cold climate conditions (sustained temperatures below 0°F / -18°C) the vent termination may be severely blocked by icicle and frost build-up. The boiler control will automatically shut down the boiler should air or vent be blocked. Remove blockage if possible. Acknowledge the fault and the boiler should attempt to restart. If blockage is not obvious and cannot be removed, contact a qualified service technician.

Diagnosis and Correction (continued)

Fault	Cause	Corrective Action
<p>"Please change batteries" appears in display window or Display window fails to illuminate</p>	<p>Batteries discharged</p>	<ol style="list-style-type: none"> 1. Switch off heating system on/off switch on the control unit as well as line voltage. 2. Remove the programming unit. 3. Remove battery compartment from rear panel. 4. Change batteries. Use alkaline batteries (AAA). <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>IMPORTANT</p> <p>Insert batteries as illustrated.</p> </div> <ol style="list-style-type: none"> 5. Insert battery compartment into rear panel. Snap programming unit back into place.  <ol style="list-style-type: none"> 6. Switch on heating system on/off switch and line voltage. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>IMPORTANT</p> <p>Please be sure to dispose discharged batteries in an environmentally sound manner. Please inquire at local recycling facilities about public recycling programs available.</p> </div>

Service Instructions for Your Heating System

Viessmann strongly recommends inspection/service of the boiler and the system by a licensed professional heating contractor once a year.

Before the heating season begins, the boiler with its burner(s) and direct vent system should be serviced by a qualified heating contractor. Service contracts may be established through gas suppliers or other licensed contractors in your area.

Regular inspection/service ensures troublefree, energy-efficient and environmentally friendly heating activity of your heating system.

Boiler

All boilers must be cleaned on a regular basis as debris build-up will result in increased flue gas temperature, and thus in increased energy consumption.

→ Notes on operation:

- Ensure boiler room and boiler are clean.
- Regularly check heating system pressure on the pressure gage: If the needle of pressure gage is below 12 psig, the system pressure is too low; in this case, please contact your heating contractor.

Domestic hot water storage tank

Inspection and (if necessary) cleaning of the tank must take place within 2 years of initial start-up and as required thereafter.

Cleaning of the inside surfaces of the domestic hot water storage tank, including domestic hot water connections, may only be performed by an licensed professional heating contractor.

Vitocell 100:

Viessmann recommends an annual inspection, and replacement if required, of the consumable anode by a licensed professional heating contractor. The inspection can be carried out during regular operation of the heating system; shut-down is not required. The heating contractor measures the protective current with an anode testing instrument.

IMPORTANT

If the domestic cold water supply to the hot water storage tank has a water treatment device (water softener) installed, ensure its proper working condition is checked regularly by your heating contractor.

The same applies if a dirt trap or a water filter is installed in the domestic cold water supply. Any of these devices installed in the domestic cold water supply must be flushed out and serviced on a regular basis.

Drinking water filter (if installed)

For hygienic reasons

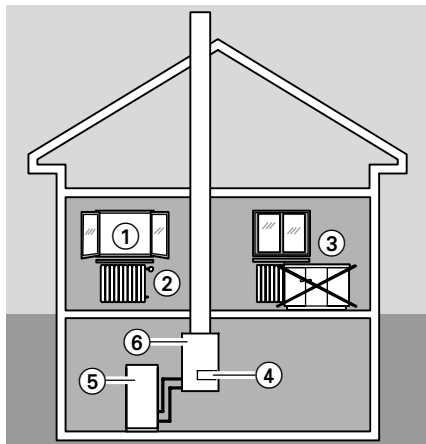
- replace filter element every 6 months on filters which cannot be flushed back, and perform a visual inspection every 2 months,
- flush back reversible flow filters every 2 months.

→ Please follow manufacturer's instructions.

How to Save Energy

.... by heating correctly

Apart from taking advantage of the benefits of a modern heating system, there is a lot you can do yourself to achieve additional fuel savings. For instance:



- Don't overheat:
Aim at a room temperature of 68 °F/20 °C. Every degree less in room temperature will reduce your heating bills by up to 6 %.
- Close window shutters (if installed) at dusk.
- Operate thermostatic valves (2) correctly.
- Don't obstruct radiators (3) and thermostatic valves (2).
- Make use of individual adjustment options of the control unit (4); e.g. "normal room temperature" alternating with "reduced room temperature".
- Set the domestic hot water temperature of the DHW tank (5) on the control unit (4).
- Control your consumption of hot water:
A shower generally consumes less energy than a bath.

... with regular maintenance

Regular maintenance check-ups of your heating system 6 by a licensed professional heating contractor will ensure energy savings and environmentally friendly operation.

.... with effective insulation

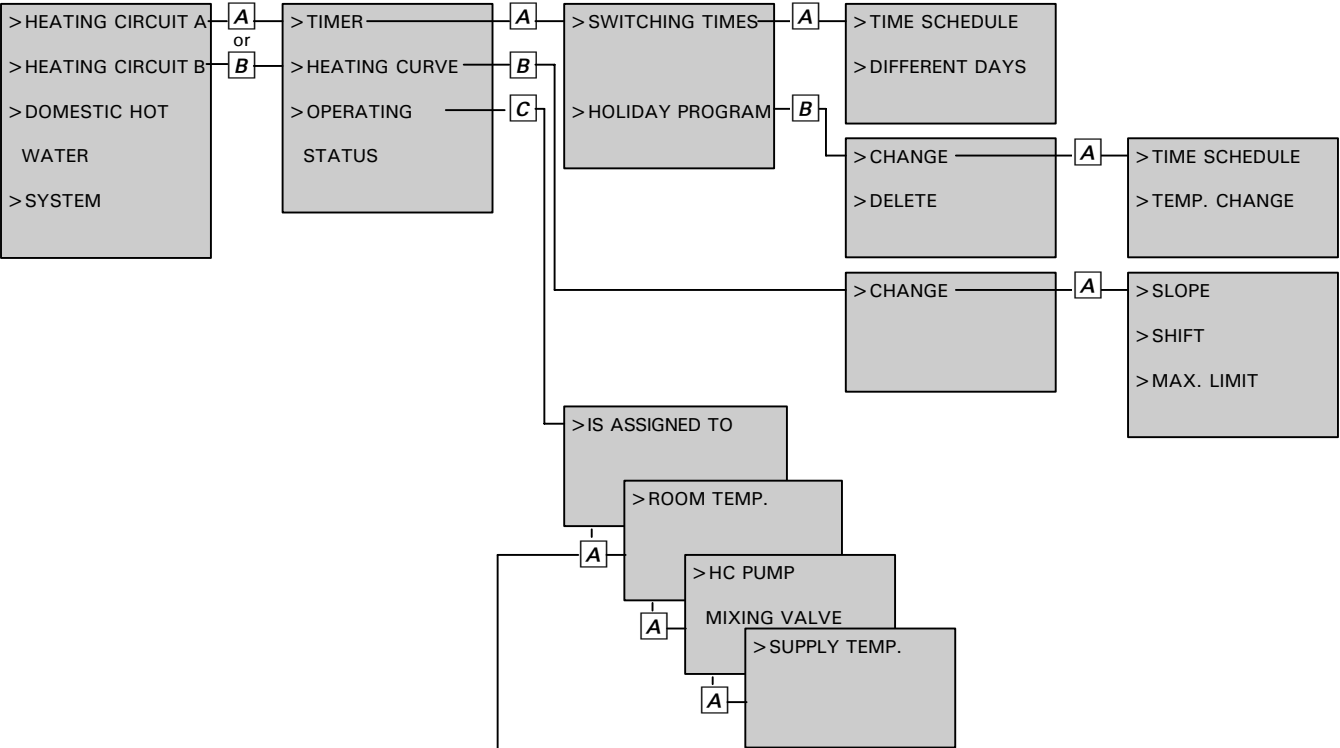
If you wish to make use of additional energy-saving measures, check the thermal insulation:

- of heating and domestic hot water pipes.
- of external walls and the roof.
- between heated and unheated rooms.
- of the windows.

Overview of Menu Structures

The main menu provides you with options which direct you to further functions and information. The overview is displayed upon opening the cover of the programming unit.

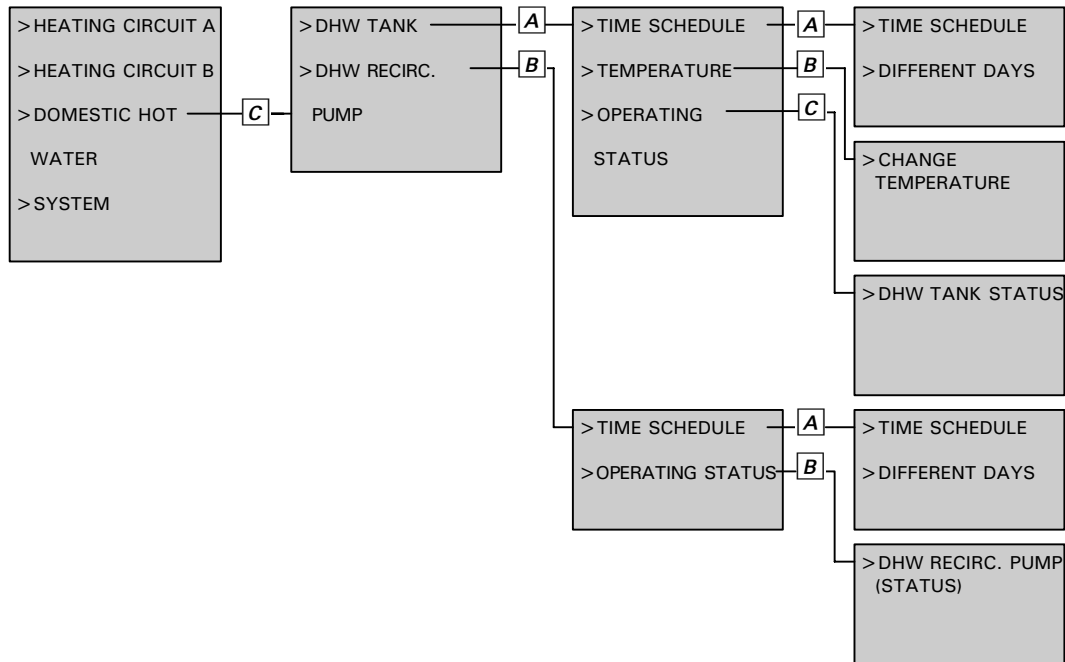
Menu structure – Heating circuits A and B



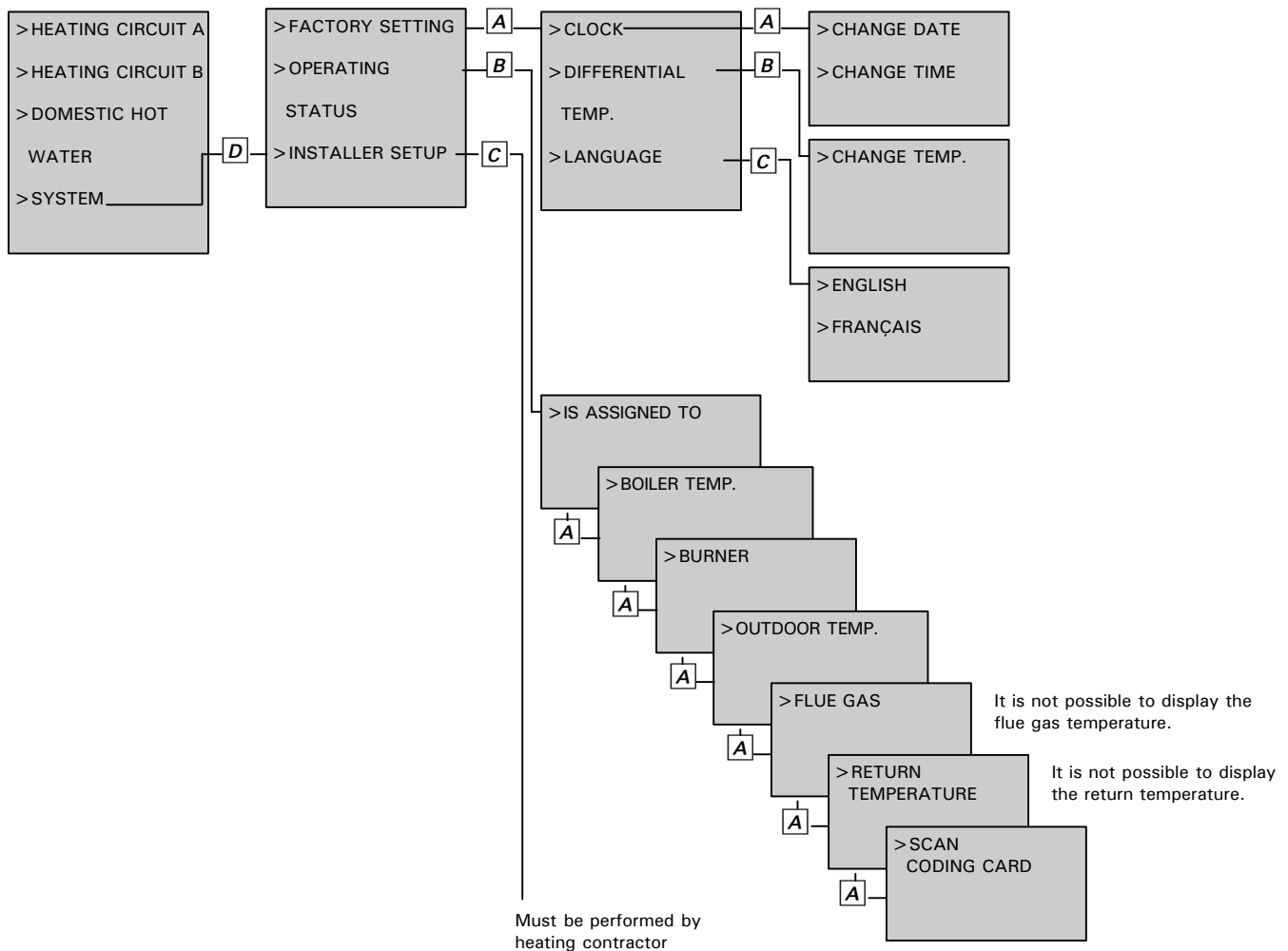
When the programming unit is used as remote control

Overview of Menu Structures (continued)

Menu structure – Domestic hot water



Menu structure – System



Lighting and Operating Instructions

FOR YOUR SAFETY READ BEFORE OPERATING

W A R N I N G: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. **BEFORE OPERATING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

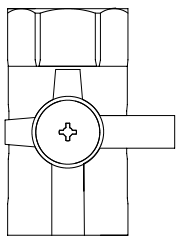
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

OPERATING INSTRUCTIONS

1. **STOP!** Read the safety information above on this label.
2. Set thermostat or other operating control to lowest setting.
3. Turn off all electric power to the appliance.
4. This device is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.

Manual gas shutoff



Open

Closed

5. Close main gas shut-off valve.
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
7. Open main gas shut-off valve.
8. Turn on all electric power to the appliance.
9. Set thermostat or other operating control to desired setting.
10. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.

TO TURN OFF GAS TO BOILER

1. Set thermostat or other operating control to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Close main gas shut-off valve.

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Quick Reference

°C	°F
-40	-40
-35	-31
-25	-13
-20	-4
-18	0
-16	+3
-14	+7
-12	+10
-10	+14
-9	+16
-8	+18
-7	+19
-6	+21
-5	+23
-4	+25
-3	+27
-2	+28
-1	+30
0	+32
+1	+34
+2	+36
+3	+37
+4	+39
+5	+41
+6	+43
+7	+45
+8	+46
+9	+48
+10	+50
+12	+54
+14	+57
+16	+61
+18	+64
+20	+68
+25	+77
+30	+86
+35	+95
+40	+104
+50	+122
+60	+140
+70	+158
+80	+176
+90	+194
+100	+212
+110	+230

Printed on environmentally friendly
(recycled and recyclable) paper.



Technical information subject to change without notice

Viessmann Manufacturing Company (U.S.) Inc.
45 Access Road
Warwick, Rhode Island • 02886 • USA
Tel. (401) 732-0667 • Fax (401) 732-0590
www.viessmann-us.com • mail@viessmann-us.com

Viessmann Manufacturing Company Inc.
750 McMurray Road
Waterloo, Ontario • N2V 2G5 • Canada
Tel. (519) 885-6300 • Fax (519) 885-0887
www.viessmann.ca • mail@viessmann.ca

5167 475 v1.2